REMARKS

The Official Action of March 2, 2005, and the prior art cited and relied upon therein have been carefully studied. The claims in the application are now claims 1-29, and these claims define patentable subject matter warranting their allowance. Favorable reconsideration and such allowance are respectfully urged.

New claims 12-29 have been added. Claims 1-29 remain in the application for consideration.

In response to the Examiner's objection to claims 3 and 4 and rejection of claims 10 and 11 under 35 U.S.C. §112, second paragraph, Applicant has amended these claims to eliminate each of the problems identified by the Examiner. Applicant respectfully submits that this objection and rejection have now been overcome.

The Examiner has further rejected claims 1 and 11-17 under 35 U.S.C. §103(a) as being unpatentable over Porter '379 in view of Handke '960, claims 1, 5 and 6 under 35 U.S.C. §103(a) as being unpatentable over Porter '379 in view of Jeffries '874, and claims 2-4 under 35 U.S.C. §103(a) as being unpatentable over Porter in view of Handke, further in view of Jobelius '987. Applicant respectfully traverses these

rejections especially as applied to the claims as amended, and new claims 12-29.

To facilitate the Examiner's review, Applicant notes that new independent claim 12 combines the features of amended claim 1 and original claim 6 with the features that the spring element is disposed between the piston and the guide and seal unit as disclosed in Fig. 2 and 4.

New claims 13-18 correspond to the features of original claims 2-5, 10 and 11.

New independent claim 19 combines amended claim 1 with the feature of a first and a second fastening element and the feature that the at least one spring element is compressed slightly without an external force and which can additionally be compressed by a tensile factor. The fastening elements are disclosed in the original application on page 3, line 24 to page 4, line 4. The compression behavior of the at least one spring element is disclosed on page 8, lines 9-20 and page 8, line 22 to page 9, line 5.

New claims 20-29 correspond to the features of original claims 2-11.

With regard to the prior art rejection, Applicant notes that Porter discloses a hydraulic positioner comprising

a casing 12, a guide and seal unit 26, 33 and a piston rod 16 secured to a piston 30. The piston is axially reciprocable in a piston chamber 38 filled with a hydraulic fluid. The piston divides the piston chamber in a first and a second sectional chamber connected by a valve 40.

Porter requires a hydraulic positioner which is continuously self-compensating for changes in piston chamber volume due to piston rod movement, for changes in hydraulic fluid volume resulting from thermal expansion or contraction, and for fluid loss over the service life of the device (see column 2, lines 37 to 45 of Porter).

In order to meet these requirements Porter provides a hydraulic positioner with a first spring means 18 and a second spring means 74 cooperating together for moving and urging the guide and seal unit in order to compensate for changes in fluid volume in the piston chamber (see column 7, lines 28 to 32 of Porter). However, Porter does not disclose a spring means which springily counteracts any extension of the piston rod relative to the casing for at least part of a length of extension. Porter discloses a spring means which springly urges the piston rod to its extended position relative to its casing. By moving the piston rod 16 in the direction of extension the piston chamber volume is increased

and the spring element 74 expands against the direction of extension. Thus, the spring element 74 springly supports any extension of the piston rod in the direction of extension. By moving the piston rod 16 against the direction of extension the piston chamber volume is decreased and the fluid 38 compresses the spring element 74. Thus, the spring element 74 urges the piston rod to its extended position relative to its casing.

In comparison to Porter, the claimed invention provides an adjustable-length gas spring with at least one spring means, which springily counteracts any extension of the piston rod relative to its casing to avoid an abrupt stop and to provide an additional lift of stroke. For this reason, the gas spring of the present invention has a damping effect in an extended position of the piston rod.

However, Porter discloses a stop ring 34 between the guide and seal unit and the piston, so that the piston is axially movable between the stop ring 34 and the cylinder end 22 (see column 5, lines 31 to 33). In an extended position of the piston rod, the piston 30 hits the stop ring 34 in an undamped manner.

As a result, the hydraulic positioner disclosed in PORTER has a completely different effect than the gas spring

of the claimed invention and solves a completely different problem.

Applicant respectfully submits that a person skilled in the art would not have combined Porter and Handke. In column 2, lines 34 to 38, Porter indicates that:

> "*The present trend in ground transport applications is to use gas-spring positioners. These devices are low cost, but have poor service life because of leakage of their highly compressed gas charge. Hydraulic positioners offer many advantages over gas-spring devices.*"

Porter refers expressly to hydraulic positioners, because gas-spring positioners have many disadvantages. Porter avoids these disadvantages by using a hydraulic positioner rather than a gas-spring positioner as claimed.

Applicant further submits that a person skilled in the art would not have combined Porter with Jeffries. As noted above, Porter refers expressly to hydraulic positioners in order to avoid the disadvantages of gas-spring positioners.

New claim 12 contains the additional feature of at least one spring element disposed in the first sectional casing chamber between the piston and the guide and seal unit. Porter discloses a spring element which is disposed outside the fluid chamber between the guide and seal unit 26, 33 and a cylinder end 72. Although, Handke discloses two spring

elements 152, 156 (see fig. 1) which are disposed in a first working chamber and between the piston 120 and the guide and seal unit 136, Handke does not teach or suggest why the spring element 74 in Porter should be disposed between the guide and seal unit 26, 33 and the piston 30. By disposing the spring element 74 between the piston 30 and the guide and seal unit 26, 33 the hydraulic positioner disclosed in Porter would no longer be able to compensate changes in the piston chamber volume due to piston rod movement. Thus, a person skilled in the art would not have disposed the spring element 74 in Porter according to claim 12.

Furthermore, neither Porter nor Jeffries discloses a spring element, which is disposed between the piston and the guide and seal unit.

With regard to new claim 19, it contains the additional feature of at least one spring element constructed so that the valve is in an open position with no external force acting between the fastening elements, the at least one spring element is slightly compressed, and when the valve is in an open position with a tensile force acting between the fastening elements, the at least one spring element can additionally be compressed in the direction of extension.

By a tensile force, the piston 30 of the hydraulic positioner disclosed in Porter is moved against the stop ring 34. The spring element 74 expands by this movement. Thus, the spring element 74 cannot be compressed by a tensile force.

Furthermore, Handke does not disclose a valve in a vicinity of the piston, which interacts with a spring element in the claimed manner.

Acknowledgement by the PTO of the receipt of applicants' papers filed under Section 119 is noted.

The prior art documents made of record and not relied upon have been noted along with the implication that such documents are deemed by the PTO to be insufficiently pertinent to warrant their applications against any of applicant's claims.

Favorable reconsideration and allowance are earnestly solicited.

Respectfully submitted,

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